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ABSTRACT

The present evaluation attempts to simplify the task of incorporating the affective components into an existing system of goals for the school. The two major sources used in collecting the affective goals were existing personality tests and psychological theories of personality. After compiling the affective goals, the team developed their own test evaluation method (labeled the MEAN method) which consists of four evaluation criteria: measurement validity, examinee appropriateness, administrative usability, and normed technical excellence. Among the major findings of the evaluation effort were the generally poor validity ratings for both content and predictive validity, and similarly poor results on the reliability measures (normal technical excellence). The two most conspicuous findings were: (1) the areas that had almost no (General Activity, Lethargy), or few (Need Achievement and Interest Areas, and Self Esteem) measures available; and (2) the many tests with poor ratings on the first and fourth MEAN criteria. (Author/EK)

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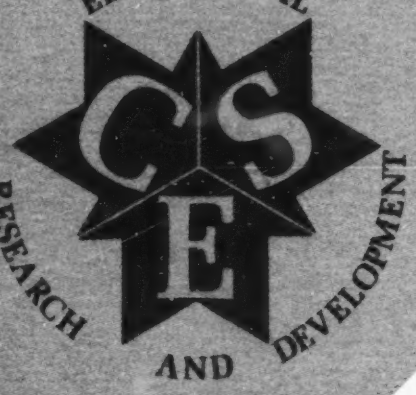

MEASURING NORMAL AFFECTIVE STATES IN CHILDREN

Symposium Presented at the 1970
Annual Convention of the Western
Psychological Association

Ralph Hoepfner, Chairman

CSE Report No. 58
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AN EVALUATION OF NON-PROJECTIVE PERSONALITY MEASURES

Introduction

One of the major complaints directed at today's educational system is that the affective components of education have been neglected. A strong impetus to the popular support of this criticism came from A. S. Neill's (1960) "Summerhill," a so-called educational revolution. The realization, also, that many products of the present educational system have developed into ineffective people and irresponsible citizens has led to a reevaluation of our educational goals.

The school room has traditionally been subject-matter oriented. Educational ideals have always aimed to produce responsible citizens capable of looking critically at society, but until recently the schools have not considered it their responsibility to be concerned with mental health in other than a negative, disciplinary way.

However, if students' energies are being sapped by emotional problems, no teaching method can be effective. The important capacity for a school system of a democratic society to develop is objective, critical thinking accompanied by a feeling of national responsibility. This capacity cannot be nurtured without a base of healthy self-respect tempered by lack of over-concern with personal drives.

The aforementioned criticism of today's educational system demands changes in its educational objectives to encompass the affective components. At the same time, however, the schools are being pushed to prepare specialists and are also criticized for producing too many scientific

types without enough cultural background. In order to answer these demands of the public without keeping the students in school 24 hours a day, a serious, dedicated effort on the part of educators and others is called for.

The present evaluation attempted to simplify the task of incorporating the affective components into an existing system of goals for the school. To select their affective goals best, schools need to have a selection that is as inclusive, objective, and flexible as possible. In collecting affective goals for evaluation, the attempt was to be inclusive and objective; in the final organization of the affective categories the purpose was to allow for the greatest flexibility, with the fast changing future in mind.

The two major sources used in collecting the affective goals were existing personality tests and major psychological theories of personality, which enabled the evaluation team to be inclusive in terms of the affective dimensions extant in the literature. After compiling the affective goals, the team developed a test evaluation procedure to simplify the task of the school system in selecting measures of these goals. The test evaluation method, labeled the "MEAN" method, consists of four evaluation criteria: (1) measurement validity, (2) examinee appropriateness, (3) administrative usability, and (4) normed technical excellence.

These four criteria answer the following four questions respectively:

(1) Does the test measure the educational objective?

(2) Is the test appropriate for the students?

(3) Can the test be easily utilized by the school?

(4) Is the test reliable and refined in measurement?

The MEAN Criteria

The first criterion was a measure of content and construct validity, and evidence for predictive and concurrent validity was also weighed. Each test was evaluated as to which behavioral objectives it was attempting to assess and then judged according to its actual capacity to assess that particular objective.

Examinee appropriateness, the second evaluation criterion, was designed to assess the appropriateness of the test for the students who would be taking it. Examinee appropriateness, in all its aspects, is relative to the age and grade level to which the test is directed. The test instructions, test format, quality of illustrations and print, speededness vs. power, and the mode of response recording were all considered under this criterion.

The third criterion, administrative usability, was concerned with practicality. This was an evaluation in terms of administration, scoring, interpretation, and decision-making. A test's utility is affected by the size of the group it can be administered to, the training necessary to administer it properly, and by the ease of its scoring procedure. Another consideration of usability is the ease of interpreting scores to reach a decision. Representativeness of the normative sample was also evaluated as a part of administrative usability.

The last major criterion of the MEAN evaluation procedure, normed technical excellence, was concerned with the reliability, replicability, and refinement of measurement of the tests. Three types of reliability were evaluated: (1) test-retest reliability, (2) internal consistency, and (3) alternate-form reliability. The replicability of procedures to obtain the scores, range of coverage, and gradation of the inter-individual comparison scores were also evaluated under normed technical excellence.

Objectivity was achieved by using the same procedure and criteria to judge each test and by having each test judged by at least two trained evaluators. These ratings were recorded by the school evaluation team. Every available test located by the evaluation team now has at least two forms filled out and maintained at the school evaluation project.

Findings

Among the major findings of the evaluation effort were the generally poor validity ratings for both content and predictive validity, and similarly poor results on the reliability measures (normed technical excellence). Almost all tests in the following areas were given "C" ratings for all grades on these important criteria:

(1) Shyness-Boldness

(2) Neuroticism-Adjustment

(3) Dependence-Independence

(4) Socialization-Rebelliousness

(5) Hostility-Friendliness

(6) School Orientation

(7) Self-Esteem

It is noteworthy that these categories were the more subjective ones, which are always more difficult to measure effectively. This situation was not unexpected considering the state of our knowledge of affect.

For tests that were frequently given low validity ratings: (1) the evaluation team's objective categories did not match the objective categories of the tests, in which case the low rating was an artifact, or (2) the categories of the tests were testing mini-constructs and were placed in major-construct categories (often in these cases all the items are testing the same construct and therefore yield high reliability.)

The fact that so many of the tests were described as measuring one category and yet were evaluated by the team as actually being in a different category, or else in one of the more inclusive categories, was important. It was also noteworthy that most of the tests referred to very different categories with little inter-test standardization of test categories.

To exemplify this situation and illustrate the validity issue, several of the subtest categories, corresponding to a few of the behavioral objectives, are listed below:

Shyness-Boldness:	Obedient vs. assertive, shy vs. venturesome, sober vs. happy-go-lucky, extraversion.
Neutoticism-Adjustment:	Nervous symptoms, personal adjustment, withdrawal tendencies, affected by feelings vs. emotionally stable, phlegmatic vs. excitable, placid vs. apprehensive.

Dependence-Independence: Self-reliance, sense of personal freedom, tough vs. tender-minded, vigorous vs. doubting, socialization.

Hostility-Friendliness: Anti-social tendencies, community relations, feeling of belonging.

Since the evaluation of each test was largely determined by the purpose that the particular test was to serve, the fact that their objectives were often misleading had a great effect on their grades. Decisions as to which goal was most appropriate to a test were not based merely upon the objective implied by the test name or on the objectives set out in the test manual. The evaluators reviewed the individual items and then decided which goal best reflected the plurality of the items.

Another significant finding was that although several dimensions of affectivity were very well covered by assessment instruments, others were not covered at all, such as:

(1) General Activity-Lethargy

(2) Need Achievement

(3) Interest areas in grades 1 and 3

Possible explanations were offered by the evaluators for these deficient areas:

(1) General Activity-Lethargy: Hopefully this is due to the general attitude that activity is more of an innate temperament than a factor in mental health. Since the range of normal activity is large, a truly abnormal activity level might be obvious without testing.

(2) Need Achievement: Possibly this is not assumed to be well-developed in the early grades; however, that is probably an erroneous assumption, as social pressures and motivations are already considered to be established at this age by developmental psychologists.

(3) Interest Areas: In the first and third grades there are practically no measures available at present. Interest areas are probably not well-formulated at this point, but natural affinities are and seemingly the early grades would be the best place to test for them. The dearth of measures in this area was noted and gave impetus to the second paper in this symposium, "Children's Interest Areas and Their Assessment."

Although each test does have two or more complete rating forms filled out, the goals of this evaluation effort did not include individual criticism of the tests. However, criticism of the entire field of non-projective personality measures was a goal.

Conclusion

The two most conspicuous findings were: (1) the areas that had almost no (General Activity-Lethargy) or few (Need Achievement and Interest Areas, and Self-Esteem) measures available. Here the need is not for more of the same tests, but rather for tests that cover the presently deficient areas; and (2) the many tests with poor ratings on the first and fourth criteria. To this deficiency, the team suggested:

1. Validity: (a) Items need to be written more carefully in terms of testing what they purport to in their titles.

This generally involves a broader sampling of representative behaviors, and behaviors that are common among contemporary children.

(b) Items need to be compared more thoroughly to other well-tested measures of the same objective; but item formats need major changes. Verbal and ideational situations can be responded to adequately by the gifted few, at best. Formats need illustrated activities or active behaviors.

2. Reliability:

(a) Scales need to be more comparable from form to form.

(b) Items need to be written so that they will reliably test the same things after an interval of time.

The other salient criticisms made by the evaluation team were:

(1) Items need to be more relevant to a child's everyday activity.

(2) Items need to be more appropriate to the level of comprehension of primary school children, and

(3) Scales should have greater psychometric excellence such as reliability, norms, and gradation of scores.

The dearth of multi-trait, multi-method investigations was suggested as the cause of these perpetuated deficiencies. Hopefully the type of feedback the test publishers now have available to them about all the measures in this area will eventually result in a correction of these deficiencies, which have not been responded to previously.

CHILDREN'S INTEREST AREAS AND THEIR ASSESSMENT

There is extensive evidence of the importance of interests in the elementary school-age child. Since interests affect what and how efficiently one learns, the school curriculum might well be developed in accordance with children's interests and needs if it is to have maximum effectiveness. In order to accomplish such a goal, methods of assessing children's interests must be developed and employed. This paper is a report on an interest assessment device developed by the School Evaluation Project at the Center for the Study of Evaluation. As such, it is designed for group assessment in the classroom. The interest inventory focuses on the primary-grade school child, since the material for this age level is exceptionally meager.

The literature in education and psychology contains many definitions of interest, ranging from the "affective side of capacity" (Woodworth, 1918) to a "learned motive" (Hurlock, 1956). The School Evaluation Project defines interest as a characteristic disposition, organized through experience, which impels an individual to seek out particular objects, activities, understandings, skills, or goals for attention or acquisition (Getzels, 1956). An interest can be described as a liking or disliking state of mind accompanying the doing of an activity or the thought of doing the activity. Interests may or may not be preferred to other interests, and they may continue over varying periods of time. It is assumed that if an individual is interested in an activity, he will do it or want to

do it; given the opportunity, one pursues his interests. When one finds an activity satisfying, it continues to be an interest. Following this reasoning, the project has chosen to measure external interests--those interests which are manifested in an activity itself.

There has been extensive treatment of the importance of interests in an educational setting. Interests have been shown to be significant in affecting the motivation and effort of students. There are several prominent interpretations of the "doctrine of interest": the view that learning cannot take place without a feeling of interest, the theory that all education should begin by an appeal to the present interest of the individual, and the view that the aim of education is to induce many-sided interests are examples of such interpretations. However, each view can be misused in extremes. It appears to be most valuable to think of the presence of interest in an area of experience as indicating the possibility for increased learning in that area, in most cases. After interests have been identified, provision should be made for their expression and direction into appropriate channels. The interests of the pupils in any class, then, constitute an opportunity and a challenge to effective teaching. A standardized inventory interpreted accurately can help teachers and parents to understand the interest patterns of the individual child. The inventory can also help a teacher in enriching a child's experience by recognizing areas of interest which, however, also reveal a lack of experience in those areas.

Upon examination of the literature on children's interests one finds that the amount of research devoted to measuring the interests peculiar

to children has been relatively small. There were many studies of children's interests during the period 1920-1936. Few recent comprehensive studies are available.

The methods which have been used in assessment include questionnaires, interviews, anecdotal records, observations, and inventories. It has been found that the study of the nature and extent of each child's play activities should yield important insight into his interests. Other clues to a child's interests include the questions he asks, what he talks about when he is with his peers, what he reads about in his free time, what he draws spontaneously, and what his wishes are. However, most of these methods of assessing interests are not applicable to objective group assessment. It appears best to utilize an inventory in an educational setting. It has also been found that using a standardized interest inventory or survey is an accurate means of evaluating children's interests. The use of an interest inventory in assessment is based on the theory that a dependable picture of an individual's interest pattern can be obtained by asking him to express likes and dislikes of a large number of diverse activities. There are approximately eight standardized or informal interest assessment devices for the elementary grades. The main emphasis, however, appears to be on the intermediate grades.

The earliest attempt to measure children's interests by means of pictures occurred as early as 1936 (Giles). This was a measure of vocational interests. The area of vocational interests appears to have been the main focus of the studies of children's interest. Since it has been

found that vocational interests are relatively unstable in the elementary school age child, information concerning such interests would be of minimal use to school personnel and to child psychologists.

Existing instruments for this age level exhibit many weaknesses. Frequently, the items are not comprehensible to the subjects. If the child does not recognize an activity, it is impossible for him to disclose correctly his interest in it. The straightforward questionnaire approach presents further problems. The child may not be truthful. An item may mean different things to different children. Furthermore, what the child says he likes may not be reflected in his actions in everyday life. There is little evidence for the empirical validity of items and derived scales, which is actually more important than the apparent meaning or content. Many people may logically define scales in different ways, however, an empirical definition is most valid. The areas measured within an instrument often are not evenly represented. If one scale is represented by more items than another, it is reasonable to assume that it will be the dominant interpretation scale. Some authors assume that the interests are normally distributed in the specific norm population one establishes. Consequently, the interest inventory is scored to measure the normalcy of the child's interests according to sex and grade. Some authors also have followed the misconception that the normal child has all the interests of his grade and sex group, and not other interests. There is, in addition, a noticeable lack of adequate theories of interests which can be used as guides in experimentation. Often, authors of interest instruments do

not even provide a definition of interest. These are only a few of the common problems existing in interest measures for the elementary school age child.

Development of the Interest Inventory

There appears to be a need, then, for a more adequate interest assessment device for the primary-grade child. The interest inventory being developed utilizes pictorial items in a multiple-choice format. There has been considerable justification for experimental work with interest inventories employing other than verbal media. It is felt that drawings should increase reliability, as they provide stimuli which are less ambiguous than those in the most common, all verbal inventories. A picture inventory also facilitates assessing subjects with limited reading capacity. Though the inventory has been designed for the primary grades, it may be found to be appropriate in the intermediate grades as well. There is a masculine and a feminine form of the inventory; however, the same activities appear in both forms. The only difference is the sex of the child with which the subject is asked to identify on the inventory. Each subject responds to each picture twice; once to the question "Do you do this often?," and once to the question "Would you like to do this?" The second question is included to provide for interests which one does not have the opportunities to pursue. The modes of external interest to be assessed include mainly leisure-time activities.

Approximately ten basic interest dimensions in children are hypothesized. The dimensions will be extracted empirically through factor analysis.

This type of analysis, which is used frequently in studies of adolescent and adult interests, has not been emphasized in the area of children's interests.

The areas from which items have been selected for this inventory include active play, artistic, domestic, mechanical, outdoor, person-orientation, passive play and scientific.

The recognizability of the items will be tested with first graders. It is hypothesized that at least 90% of the group will recognize the pictures to be the intended activities. An informal validation procedure is also planned, in which a sample of children that take the inventory in a group will be asked individually whether they like or dislike each activity.

The real test of the experimental interest inventory will be a positive response to these questions: does it help to gather facts quickly about pupil activities that could also be gathered using more laborious techniques and does it help to predict the kinds of activities pupils would enjoy if suitable opportunities were provided? These questions will be answered only after the instrument has been used conscientiously by teachers in the field.

THE CHILD'S ATTITUDE TOWARD SCHOOL

The Attitude to School Questionnaire (ASQ) was designed to fill a need for an objective, reliable measure of first-graders' attitudes toward school. Such a measure is needed in order to uncover the relationship of attitudes to other school variables, such as achievement or creativity.

It is assumed that attitudes play an important role in school performance, and that a child with a favorable attitude will achieve more and be better adjusted. If it is a valid assumption that attitudes play a role in school performance, then perhaps the ASQ may be used to help in the prediction of performance or to diagnose problems of attitude which will have academic consequences. If the existence of a significant relationship between attitudes and school performance has not been demonstrated, then a reliable, objective instrument is needed to examine the problem.

The latter situation seems to be the case: that a significant relationship between attitudes and achievement has not been demonstrated. Various studies have reported correlations between attitudes and achievement ranging from -.1 to +.35.

It may be very difficult to justify any time or expense used to improve student attitudes, if one cannot demonstrate that a better attitude produces less anxiety, more achievement, better grades, or more creativity. How can the attempt to measure or improve attitudes be justified?

John Holt (1964) considers attitudes important as ends in themselves, rather than as means to increase achievement. He feels that attitudes may be all that a child really gets from school, so the attitudes ought to be positive ones. If favorable attitude toward school is considered to be an end desirable for its own sake, it is worthwhile to note that attitudes tend to become more negative in the course of a school year or over the school career.

The Instrument

The aim of this research was to develop a measure of first-graders' attitudes toward school. This measure should not require individual administration, nor should it require subjective judgments in the scoring. Administration should need only the skills common to ordinary school teachers.

With these limitations in mind, it was felt that a mass-administered paper and pencil test would be superior to other possible formats (checklist for observation of contrived or uncontrived situations, interview, consensus of observers). Because of the limited vocabulary of first-graders, the semantic differential approach was felt to be inappropriate to this research. In making a paper and pencil test for first-graders, there are a number of serious limitations which the ASQ has handled.

First, one cannot assume that the first-grader can read at all. This instrument does not require the first-grader to read anything. The student looks at a series of cartoons, and listens as the administrator explains what is going on. The child then shows his reaction by marking an appropriate face.

Second, one must assume that the first-grader has a limited listening vocabulary. In the ASQ, the vocabulary is controlled. Each word spoken by the administrator during the test has been checked against the Rinsland and Thorndike word lists. All words are among the 2,000 most common words for first-graders except "principal," "office," and "mathematics" or "arithmetic." These four words were unavoidable and defied substitution.

There was a conscious effort to avoid complex syntax. In the items of the instrument there are 166 sentences, of which 143 are simple sentences, 9 are compound sentences, and 4 others have a conditional structure. Ten others have participles, infinitives, or indirect quotations.

Third, one cannot assume that a first-grader knows his numbers well enough to respond to the numbering of items on pages. In the ASQ, the pages (and therefore the items) are differentiated by color, rather than number. The administrator can glance around the room to see if all students are on the right page.

Fourth, one should not confuse the child by using a coded answer mode such as an IBM sheet or numbered Likert scale. In the ASQ, there is no coding in the response format. The child looks at the cartoon story; the last panel of the story always consists of three faces: happy, neutral, and unhappy. The child marks in the test booklet, right on the face which corresponds best to his own feelings in response to the story.

Fifth, it is not clear whether all first-graders can project themselves into situations described in test items. The ASQ was written in the second person; i.e., "How do you feel?" Tests which are written in the third person run several risks. Subjects may not realize that they are supposed to identify with the given central character. Subjects may take their cues from the pictures more than from their own personality structures. If the item involves a character who is named ("The teacher sits next to Bill"), then subjects may associate "Bill" with a particular "Bill" in their class, and respond accordingly, marking down how they think "Bill" feels, rather than how they feel. Finally, there is the problem of cross-sex identification. Separate booklets were designed for boys and for girls. The stories are the same; only the sex of the main character is different.

To aid the child in projecting himself into the stories, a stereotypic figure is used as the main character throughout all of the items; one stereotypic figure in the boys' booklets, another in the girls' booklets.

The Field Test

The instrument was administered to 263 first-graders in four elementary schools in Simi, California, in the last two weeks of February, 1970. The subjects were in 11 classes of 28 pupils or less. No classes were used which mixed first-graders with kindergartners or second-graders. The classes had ten female teachers and one male teacher.

The tests were administered to each class separately by members of the staff of the Center for the Study of Evaluation. In accordance with California state law, the teachers remained in the classrooms; by request,

they did not interfere in the testing. Also by request they walked around the room if the children became restive.

The test was administered in two sections, each lasting twenty to twenty-five minutes. There was a break between sessions lasting from five minutes to an hour, depending on the schedule of the school. Nine classes took the test in the morning; the other two took it between 11:00 a.m. and 1:00 p.m. No session preempted recess, lunch, art, or music.

Simi, California is a middle class suburb on the fringe of Los Angeles. There are no Negroes in the sample; perhaps 5% of the sample is of Spanish-American background, but all are English-speaking. Other minority groups are also absent.

In a complex domain, such as student attitude toward school, there is no single statistical technique which can adequately analyze the data. Several approaches were used for this study.

The raw data for the 54 variables were submitted to the 360/91 computer for computation of Pearson r. The sample item and the sex variable had low Pearson r's; they were eliminated from later analyses. The raw data for 53 variables was submitted in BMD 03M, a principal components factor analysis program. For the 53 variables, 29 factors had positive eigenvalues. Of these 29, 8 were retained for rotation. The first 8 factors accounted for 70 percent of total commom variance.

The eight factors were rotated to a varimax criterion. Inspection of the varimax solution revealed it to be only partly interpretable psychologically. Another rotation technique was brought into use. The first eight principal-component factors were submitted to Cliff's orthogonal factor - matching program (Cliff, 1966). This program requires the

specification of a target matrix and yields an orthogonal least-squares fit of the data factor matrix to it.

In specifying the initial target matrix for the present problem, the hypothesized subscales (attitudes to school, schoolwork, teacher, principal, peers, play, math, and reading) were used. A succession of rotations changed the target matrix as the results of each rotation indicated, but always maintaining psychologically interpretable factors. Some variables were not assigned to hypothesized factors. The fifth rotation appeared to be satisfactory and was accepted as the final solution.

Items were assigned to subscales on the basis of the factor pattern on the fifth rotation. Subscale scores were then factor analyzed using BMC 03M. For the eight variables, six positive eigenvalues appeared, of which three were retained for rotation. The three retained variables accounted for 94.2 percent of the total common variance.

Interpretation of First-Order Factors

The first, first-order factor was hypothesized as an "attitude to school" factor. The item with the highest loading on this factor is:

17. You are visiting your aunt and uncle.
    They ask you if you like your school.
    Which is your face?

It is felt that items on this factor reflect a generalized attitude toward school and that the factor may indeed be called "attitude toward school."

The second factor was hypothesized as "attitude toward school work." The item with the highest loading was:

41. Your class is doing arithmetic.
    You are doing your arithmetic.
    What is your face like?

There are three factors involving school work; this one, and two other factors measuring attitudes toward math and toward reading. The three factors do not appear to fit an orthogonal pattern. Items which load on one factor usually load strongly on one or both of the others.

The third factor was hypothesized as "attitude toward teacher." The item with the highest loading was:

38. You are walking down the hall at school.
    You see your teacher walking down the hall.
    How do you feel?

Items on this scale are not restricted to items involving "teacher;" they all seem to involve an authority figure in a non-threatening situation. Consequently, the factor can be called "attitude toward non-threatening authority."

The fourth factor was hypothesized as an "attitude toward the principal" factor. This factor had a larger number of high loadings, the highest of which was:

32. You are on your way to the principal's office.
    You are at the principal's office.
    You open the door and go inside.
    How do you feel?

There are other items, with only slightly lower loadings, which involve the teacher in an authority situation. Because of those items, it seems more appropriate to label this factor "attitude toward school authority," bearing in mind that the principal is the main authority figure.

The fifth factor was hypothesized as "attitude toward peers" and the sixth factor was hypothesized as "attitude toward non-academic school activities." Neither of these two factors appeared as hypothesized. Some of the items formed a factor best interpreted as "attitude toward show-and-tell activities." The item with the highest loading on this factor was:

5. Some children are painting.
   You have made one of your best pictures.
   You show it to one of the other kids.
   Show what his face is like.

Other items involving peers and play combined to form the sixth factor with the highest loading for this item:

31. During recess the kids are playing ball.
    You are playing ball.
    What is your face like?

This factor is best interpreted as "attitudes toward peers and play activities."

The seventh factor was hypothesized as "attitude toward math." It was found that this attitude is not strongly differentiated from

attitude toward reading or toward school work in general. Items loading on this factor also load on other factors. The item with the highest loading was:

4. (reflected) You are walking to school in the rain.
   You see someone's arithmetic work in a mud puddle.
   How do you feel?

This seventh factor may be called "attitude toward math," but it cannot be considered a strong factor.

The eighth factor was hypothesized as "attitude toward reading." The loading pattern for this factor indicates that it is correlated with the math factor and the work factor. The highest loading on this factor was:

21. Tomorrow, the class will use more time for reading.
    Show how you feel about this.

The concept of time seems to have a strong influence on this factor. However, since most of the items involve reading, the best interpretation of this factor is that it measures "attitudes toward reading." It cannot be considered a strong factor.

Factor analysis of the subscale scores for the eight factors generated three second-order factors. The first of these factors has these loadings:

.64 - attitude to school

.45 - attitude to show and tell activities

There are various possible interpretations of this factor. First, some of the items are similar; some "attitude to school" items have a show-and-tell type of component, and the "attitude to show and tell activities" often involve showing or telling about school things. Second, it may be that first-graders think of school primarily as a place to show and tell. One is reminded that children's dialogue has been called "collective monologues."

The second factor has these loadings:

.43 - attitude toward school work

.61 - attitude toward math

.66 - attitude toward reading

It was expected, on the basis of the interpretation of the first-order factors, that these three scales would cohere. They had appeared to be obliquely related to each other. The existence of the second-order factor seems to indicate that at the first-grade level, children do not discriminate clearly among math, reading, and school work in general. It seems that these three things form a unitary concept to which children have an undifferentiated attitude. It may be that the child has not developed differentiated attitudes toward math, reading, and school work in general. It is also possible that attitudes toward math, reading, and school work in general are not differentiable concepts.

The third factor has these loadings:

.52 - attitude to non-threatening authority

.55 - attitude to authority

.35 - attitude to peers and play

The first two loadings would indicate that the factor is an authority factor, but the third loading casts doubt upon this interpretation. However, examination of the items in the "Peers and Play" scale reveals a strong authority component, albeit of the impersonal, social-rule authority type. It seems fair, therefore, to consider this factor an authority factor.

The alpha coefficient for 44 selected items is .83. The alpha coefficient for the entire questionnaire, including items not used in any subscale, is .81.

SCHOOL ADMINISTRATORS VIEW AFFECTIVE BEHAVIOR AS AN EDUCATIONAL PRODUCT

The purpose of the School Evaluation Project at the Center for the Study of Evaluation at UCLA is to develop an information system to help elementary school principals: (1) assess student performance levels across a wide range of concepts and skills; (2) interpret the resulting data; and (3) provide a basis for making valid decisions for improving student performance levels. Included in the Elementary School Evaluation KIT are needs analysis procedures for the principal to use in identifying educational goals for his particular school and to assess the relative importance of these goals. Toward this end, a relatively comprehensive list of elementary school goals has been compiled and condensed under 106 headings. This set of educational goals was the result of an analysis of a wide variety of sources including curriculum guides from various parts of the country, recently published elementary school textbooks, and various regional and national curriculum studies. The goals attempt to encompass the full range of student behavior (i.e., knowledge, skills, attitudes, interests, etc.). Procedures are contained in the KIT that enable the principal to obtain systematically the views of school community members (parents, teachers, school board members, etc.) regarding which goals are of primary interest. In the process of field testing various sections of the KIT, these procedures were administered to a group of 24 elementary school principals from a large public school system in Southern California. In addition, 15 elementary school teachers and 11 parents from the same district were

asked to use the needs analysis procedures. This paper will discuss how the participants in this limited sample viewed the importance of the affective goals contained in the total set of 106 goals of elementary school education.

Procedure

The particular section of the Elementary School Evaluation KIT that was used to collect information for this brief study is designated the "Collective Viewpoints Approach to Goal Selection," and is designed to aid the school principal in gathering information regarding how various segments of the school community view the relative importance of various possible educational goals for a particular elementary school. The procedures involve having individuals sort the 106 goals into five categories on the basis of how important each goal is in terms of the characteristics students should have as a result of their schooling. The names of the five categories into which the goals are sorted are as follows:

1. Unimportant, irrelevant
2. Marginal importance
3. Average importance
4. Moderate importance
5. Most important

The participants were instructed to sort the goals, which are printed on 3" x 5" cards, into the five categories, being sure to put at least five cards in each category. Specific instructions given to the participants asked them not to consider the feasibility or practicality of measuring student performance on a goal, but to base their judgments solely on how important each goal is in terms of the characteristics students should have by the end of the sixth grade that are a result of their experiences at school.

The elementary school administrators involved in the study represented 24 of the 26 elementary school principals in the district. The district serves several communities with a combined total population of approximately 100,000 people. The students come from homes which are predominately white and middle class. The 15 elementary school teachers that rated the goals were part of a special instructional project in the district and were distributed among five of the district's elementary schools. The 11 parents were part of the parent association for one school and were randomly selected (every nth name on the class registers) by the principal of that school. The mean rating for each of the three groups was computed for each goal. The observations that follow result from the analysis of these means.

Conclusions

The 106 educational goals (see Appendix for complete list) were distributed between affective and content areas as follows:

Non-content Affective goals	10 goals
Affective goals within content areas . . .	19 goals
Cognitive goals	77 goals
Total	106 goals

When all affective goals are considered together, there is little difference in ratings between the administrators, teachers, and parents. It is interesting to note that affective goals are rated higher by all groups than are cognitive goals. This is especially true for the administrators. Yet it is the cognitive goals that receive by far the greater attention in the schools, perhaps because they are more amenable to diagnosis, instruction, and measurement.

Self-esteem was ranked highest by administrators. The ratings indicate that many believe it is more important for an individual to

have adequate self-esteem than to have an adequate knowledge of geography, but there are countless textbooks, manuals, and curriculum guides outlining in detail methods for teaching geography. Reliable tests are easily constructed to measure and diagnose one's knowledge of geography. But how does one "teach" and "measure" self-esteem?

From the data we can see that administrators consider it a primary goal of the school to produce generally well-adjusted individuals. Another problem in the attainment of such a goal, of course, is that "well-adjusted" means very different things to different people.

School administrators rate goals in the affective area, unrelated to content, (first 10 objectives) higher than do teachers or parents (see Tables 1 & 2). These goals are primarily related to general mental health and adjustment. Affective goals within content areas, however, are rated lower by administrators than by parents or teachers.

Most administrators, as well as parents and teachers consider such affective behavior as self-confidence, friendliness, generosity, respectfulness, citizenship, avoiding aggressive behavior, and liking school more important than such affective behavior as appreciation of various subject matters (science, math, art) and their application to daily life outside the classroom.

Interesting comparisons of administrator's rankings can be made within subject matter areas:

> It is more important that a child appreciate art and enjoy it than that he understand it or have artistic skill.
>
> The same is true for music.
>
> It is more important that he understand, appreciate and accept another country and its culture than that he be able to speak its language.

TABLE 1

Ratings - 29 AFFECTIVE GOALS

RANK	ADMINISTRATORS	Mean	TEACHERS	Mean	PARENTS	Mean
1.	Self-Esteem	4.71	Self-Esteem	4.60	Need Achievement Attitude toward Reading	4.64 4.64
2.	Citizenship	4.54	Citizenship Need Achievement	4.27 4.27	Citizenship	4.27
3.	School Orientation	4.46	Attitude toward Reading	4.20	Attitude and Behavior Modification from Reading	4.18
4.	Need Achievement	4.33	Dependence Independence School Orientation Attitude & Behavioral Modification from Reading	4.13 4.13 4.13	Dependence Independence Self-Esteem Independent Application of Math Science Interest	4.00 4.00 4.00 4.00
5.	Attitude and Behavior Modification from Reading	4.25	Socialization-Rebelliousness Science Interest and Application	3.93 3.93	Socialization-Rebelliousness Independent Application of Writing	3.91 3.91
6.	Hostility - Friendliness	4.21	Neuroticism - Adjustment	3.73	Neuroticism - Adjustment General Activity-Lethargy School Orientation Cultural Insight through Foreign Language Group Activity-Sportsmanship Application of Science	3.64 3.64 3.64 3.64 3.64 3.64
7.	Neuroticism-Adjustment	4.13	Shyness-Boldness Hostility - Friendliness Application of Science Methods to Life	3.60 3.60 3.60	Interest Areas	3.55
8.	Socialization Rebelliousness	4.08	Familiarity with Childrens Literature	3.53	Music Interest	3.45

	Administrators		Teachers		Parents	
9.	Independent Application of Math Skills	4.04	Interest Areas Independent Application of Writing Skills Practicing Health and Safety Group Activity-Sportsmanship	3.47 3.47 3.47 3.47	Music Appreciation Practicing Health and Safety	3.36 3.36
10.	Shyness-Boldness Attitude toward Reading	4.00 4.00	General Activity-Lethargy Independent Application of Math Interest in Social Studies	3.33 3.33 3.33	Hostility - Friendliness Familiarity with Standard Children's Literature	3.27 3.27
11.	Dependence-Independence	3.96	Application of Art Interest in Art	3.20 3.20	Interest in Sports	3.18
12.	Independent Application of Writing Skills	3.88	Music Appreciation	3.00	Interest in Social Studies	3.09
13.	General Activity-Lethargy	3.71	Musical Interest and Enjoyment	2.93	Shyness-Boldness Internalization of Art	3.00 3.00
14.	Interest Areas Group Activity-Sportsmanship	3.58 3.58	Cultural Insight through a Foreign Language	2.53	Appreciation of Art	2.91
15.	Application of Science Methods to Life	3.54	Interest and Indepndt. Partcptn. in Sports and Games	2.20	Interest in Foreign Language	2.73
16.	Practicing Health and Safety	3.50	Interest in Foreign Language	1.93	Religious Belief	2.18
17.	Science Interest and Appreciation	3.33	Religious Belief	1.47		
18.	Appreciation of Art	2.88				
19.	Familiarity with Children's Literature	2.83				
20.	Music Appreciation	2.79				
21.	Internalization of Art	2.71				
22.	Interest in Sports and Games	2.67				

	Administrators		Teachers	Parents
23.	Music Interest and Enjoyment	2.54		
24.	Cultural Insight through Foreign Language	2.50		
25.	Interest in Social Studies	2.33		
26.	Religious Belief	1.92		
27.	Interest and Application of Foreign Language	1.83		

TABLE 2

Non-content Affective Goals (first 10) N=10

Mean	
4.12	Administrators
3.88	Teachers
3.73	Parents

Affective Goals Within Content Areas

N = 19

Mean	
3.14	Administrators
3.22	Teachers
3.50	Parents

All Affective Goals Combined

N = 29

Mean	
3.63	Administrators
3.55	Teachers
3.61	Parents

Cognitive Goals N = 77

Mean	
3.12	Administrators
3.17	Teachers
3.17	Parents

Grand Mean N = 106

Mean	
3.37	Administrators
3.36	Teachers
3.39	Parents

> On the other hand, it is more important that the child write well, with style, organization, and creativity than that he enjoy writing or appreciate its importance to communication.

It may be amusing to note that it is considered more important to apply math skills and knowledge to daily life, i.e., to use these skills in games, hobbies, buying, and problem solving than it is to have the math skills, knowledge, and problem solving abilities in the first place. This is true for science also.

Practicing health and safety is given a higher ranking than knowing about health and safety. Practicing health and safety is considered more important than being healthy.

Being a good sport is rated higher than participating in sports.

The reading objectives, both affective and cognitive, are generally ranked very high. Administrators give higher ratings to attitude and behavior modification from reading than to appreciation and enjoyment of reading, while the opposite is true for parents and teachers. Of course, the rating given this goal depends on what one assumes is meant by attitude and behavior modification. Modification in a positive direction means different things to different people.

Interest and application objectives are ranked by administrators accordingly:

Math	4.04
Reading	4.00
Writing	3.88
Application of Science	3.54
Health and Safety	3.50
Interest in Science	3.33
Art	2.71
Sports	2.67
Music	2.54
Social Studies	2.33
Religion	1.92
Foreign Language	1.83

The difference in ratings between teachers and administrators was so slight that it seemed legitimate to include teacher ratings in a factor analysis of the goal ratings that explored administrator's views of the goals. The intercorrelations among the ratings for the 106 goals was factor analyzed and the first five factors were retained for a varimax rotation and consequent computation of factor scores.

The goals receiving the top five factor scores on the first factor were all non-content affective goals, i.e., those adding up to what is traditionally considered a "well-adjusted, ideal, member of society." These are the goals, as mentioned, that have very high means. The 7 other high-scoring goals are also affective, and 5 of these are non-content. In fact, the entire 10 non-content affective goals are among the top 12 factor scores.

None of the goals with the lowest scores on this first factor are affective. On the contrary, the eight lowest goals concern higher order cognitive functions (e.g., reasoning, geometry, drawing conclusions in science), and most of these goals have low mean rankings.

The second factor, unlike the first, has the high level cognitive functions among the top scoring goals (e.g., reasoning, problem-solving, critical reading, hypothesis formation). None of the affective goals are among those with high factor scores. However, the goals with low factor scores are mostly affective and extra-curricular (e.g., adjustment, drive, music, sports, socialization, friendliness).

On the third, fourth, and fifth factors affective goals are sparsely scattered among high and low factor scores. They appear to play an insignificant role in these factors.

From this analysis one can see that individuals appear to have very different opinions about the relative importance of affective and cognitive goals.

It should be noted that the goals rated highest have to do with molding the child into an acceptable if not ideal member of society, according to society's traditional standards of acceptability; he should be well-adjusted, responsible, dependable, friendly, helpful, not aggressive or hostile, not too bold, but not too shy, respectful, courteous, certainly not rebellious; he has drive, ambition, does his best, is productive, likes school, teachers, studying; above all he has self-esteem and he is a good citizen.

It might also be said that administrators rank as most important those goals which will, by their attainment, make their job the easiest. What more could a principal ask for than a school of well-behaved, well-adjusted, children who like school and like studying? Most teachers would probably want the same thing, and we doubt parents would object.

Summary

This paper is a brief analysis of the results of a rather limited sample of individuals, obtained primarily not to determine precisely school administrators' opinions about affective goals, but to field test data-gathering procedures. These procedures will be used eventually to gather more adequate data. The information presented herein has attempted to point out various aspects related to how some administrators view the desirability of affective behavior in elementary school pupils. Data were presented regarding how the administrators in our sample ranked the affective goals and how these rankings compared with those of a sample of teachers and parents. It can be said that these particular groups

viewed affective goals, especially those goals prescribing well-adjusted, sociable, non-neurotic children as among the most important school-produced outcomes. If these findings turn out to be somewhat typical, it means that as more schools begin to use needs analysis techniques of the type described in this paper, schools may discover that attention must be paid to the affective domain as well as the cognitive. Perhaps this might lead to a reevaluation as to conceptions about what the schools should and should not attempt to do. The problems involved in the attainment and measurement of affective goals are enormous. How do we measure and diagnose student performance in the affective areas? Is it even possible to do this adequately? How do we improve student performance in affective areas? By what instructional methods? How do we evaluate such methods?

Work presently underway hopefully will provide some answers to the above questions.

APPENDIX

GOALS OF ELEMENTARY SCHOOL EDUCATION

Elementary School Evaluation Kit
Center for the Study of Evaluation
UCLA

AFFECTIVE

1. TEMPERAMENT: PERSONAL
   - A. Shyness-Boldness
   - B. Neuroticism-Adjustment
   - C. General Activity-Lethargy
2. TEMPERAMENT: SOCIAL
   - A. Dependence-Independence
   - B. Hostility-Friendliness
   - C. Socialization-Rebelliousness
3. ATTITUDES
   - A. School Orientation
   - B. Self Esteem
4. NEEDS AND INTERESTS
   - A. Need Achievement
   - B. Interest Areas

ARTS-CRAFTS

5. VALUING ARTS AND CRAFTS
   - A. Appreciation of Arts and Crafts
   - B. Involvement in Arts and Crafts
6. PRODUCING ARTS AND CRAFTS
   - A. Representational Skill in Arts and Crafts
   - B. Expressive Skill in Arts and Crafts
7. UNDERSTANDING ARTS AND CRAFTS
   - A. Arts and Crafts Comprehension
   - B. Developmental Understanding of Arts and Crafts

COGNITIVE

8. REASONING
   - A. Classificatory Reasoning
   - B. Relational-Implicational Reasoning
   - C. Systematic Reasoning
   - D. Spatial Reasoning
9. CREATIVITY
   - A. Creative Flexibility
   - B. Creative Fluency
10. MEMORY
    - A. Span and Serial Memory
    - B. Meaningful Memory
    - C. Spatial Memory

FOREIGN LANGUAGE

11. FOREIGN LANGUAGE SKILLS
    - A. Reading Comprehension of a Foreign Language
    - B. Oral Comprehension of a Foreign Language
    - C. Speaking Fluency in a Foreign Language
    - D. Writing Fluency in a Foreign Language
12. FOREIGN LANGUAGE ASSIMILATION
    - A. Cultural Insight through a Foreign Language
    - B. Interest in and Application of a Foreign Language

LANGUAGE ARTS

13. LANGUAGE CONSTRUCTION
    - A. Spelling
    - B. Punctuation
    - C. Capitalization
    - D. Grammar and Usage
    - E. Penmanship
    - F. Written Expression
    - G. Independent Application of Writing Skills
14. REFERENCE SKILLS
    - A. Use of Data Sources as Reference Skills
    - B. Summarizing Information for Reference

MATHEMATICS

15. ARITHMETIC CONCEPTS
    - A. Comprehension of Numbers and Sets in Mathematics
    - B. Comprehension of Positional Notation in Mathematics
    - C. Comprehension of Equations and Inequalities
    - D. Comprehension of Number Principles
16. ARITHMETIC OPERATIONS
    - A. Operations with Integers
    - B. Operations with Fractions
    - C. Operations with Decimals and Percents
17. MATHEMATICAL APPLICATIONS
    - A. Mathematical Problem Solving
    - B. Independent Application of Mathematical Skills
18. GEOMETRY
    - A. Geometric Facility
    - B. Geometric Vocabulary
19. MEASUREMENT
    - A. Measurement Reading and Making
    - B. Statistics

MUSIC

20. MUSIC APPRECIATION AND INTEREST
    - A. Music Appreciation
    - B. Music Interest and Enjoyment
21. MUSIC PERFORMANCE
    - A. Singing
    - B. Musical Instrument Playing
    - C. Dance (Rhythmic Response)
22. MUSIC UNDERSTANDING
    - A. Aural Identification of Music
    - B. Music Knowledge

PHYSICAL EDUCATION - HEALTH - SAFETY

23. HEALTH AND SAFETY
    - A. Practicing Health and Safety Principles
    - B. Understanding Health and Safety Principles
    - C. Sex Education
24. PHYSICAL SKILLS
    - A. Muscle Control (Physical Education)
    - B. Physical Development and Well-Being (Physical Education)
25. SPORTSMANSHIP
    - A. Group Activity - Sportsmanship
    - B. Interest in and Independent Participation in Sports and Games
26. PHYSICAL EDUCATION
    - A. Understanding of Rules and Strategies of Sports and Games
    - B. Knowledge of Physical Education Apparatus and Equipment

READING

27. ORAL-AURAL SKILLS
    - A. Listening Reaction and Response
    - B. Speaking
28. WORD RECOGNITION
    - A. Phonetic Recognition
    - B. Structural Recognition
29. READING MECHANICS
    - A. Oral Reading
    - B. Silent Reading Efficiency
30. READING COMPREHENSION
    - A. Recognition of Word Meanings
    - B. Understanding Ideational Complexes
    - C. Remembering Information Read
31. READING INTERPRETATION
    - A. Inference Making from Reading Selections
    - B. Recognition of Literary Devices
    - C. Critical Reading
32. READING APPRECIATION AND RESPONSE
    - A. Attitude toward Reading
    - B. Attitude and Behavior Modification from Reading
    - C. Familiarity with Standard Children's Literature

RELIGION

33. RELIGIOUS KNOWLEDGE
34. RELIGIOUS BELIEF

SCIENCE

35. SCIENTIFIC PROCESSES
    - A. Observation and Description in Science
    - B. Use of Numbers and Measures in Science
    - C. Classification and Generalization in Science
    - D. Hypothesis Formation in Science
    - E. Operational Definitions in Science
    - F. Experimentation in Science
    - G. Formulation of Generalized Conclusions in Science
36. SCIENTIFIC KNOWLEDGE
    - A. Knowledge of Scientific Facts and Terminology
    - B. The Nature and Purpose of Science
37. SCIENTIFIC APPROACH
    - A. Science Interest and Appreciation
    - B. Application of Scientific Methods to Everyday Life

SOCIAL STUDIES

38. HISTORY AND CIVICS
    - A. Knowledge of History
    - B. Knowledge of Governments
39. GEOGRAPHY
    - A. Knowledge of Physical Geography
    - B. Knowledge of Socio-Economic Geography
40. SOCIOLOGY
    - A. Cultural Knowledge
    - B. Social Organization Knowledge
41. APPLICATION OF SOCIAL STUDIES
    - A. Research Skills in Social Studies
    - B. Citizenship
    - C. Interest in Social Studies

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